Date: Thu, 15 Sep 94 20:30:24 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #1027
To: Info-Hams

Info-Hams Digest Thu, 15 Sep 94 Volume 94 : Issue 1027

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 15 Sep 1994 15:58:17 +0300
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!EU.net!sunic!
news.funet.fi!news.cc.tut.fi!proffa.cc.tut.fi!not-for-mail@network.ucsd.edu
Subject: 1.2GHz on an HT -- how far?
To: info-hams@ucsd.edu

Patrick KB8PYM (pouelle@uoft02.utoledo.edu) wrote:

> The physics involved suggest to me (a poor unfortunate Astrophysics grad
> student) during the warm months on 1.2GHz (with leaves on the trees) you
> might be lucky to get 100 feet with a rubber duck.

The situation is not that bad. There are seasonal variations, but they
are observable starting from UHF TV channels and up.

The signal can travel without too much attenuation a few hundred meters
from the HT through a forest until it has clear line of sight path to
a repeater .

> Microwave ovens
> operate (or operated) near 1.3GHz on the principle that the H2O in the
> item to be heated is a strong absorber of energy at that frequency.

Can you give any references for this strong absorbtion peak. I have
previously heard the same story, but I havent found any references and
thus I think it is an urban legend.

For atmospheric gases I haven't seen any peaks below 10 Ghz. There is
a prominent water vapour peak at 24 GHz (that is why this band was given
to amateurs, as no-one else wanted it).

Are you perhaps confusing with the 21 cm hydrogen line which many radio
astronomers use. This radiation is due to the reversal of spin of the
electron in a hydrogen atom. I doubt that this prosess could absorb a
lot of energy from the RF-field and turn it to heat.

As far as I understand it, microwave ovens are based on dielectric heating.
Similar results can be achieved by applying enough RF anywhere in the upper
UHF range. The fact that there once was 1.3 GHz microwave ovens and that
they currently operate at 2.45 GHz is that there was or there are currently
ISM (Industrial, Scientific, Medical) allocations at these frequences.

> Personally I'd go with 6m but that's neither here nor there. Anyway,
> 1.2GHz will be line of sight, and strongly influenced by any water containing
> items in the path (might be an interesting experiment to see how much
> the signal strength changes with humidity variations).

A more interesting place would be 24 GHz :-)

'Rain fade' has more to do with the fact that the refractive index of the
lower atmosphere changes and this also lowers the appearent 'effective
earth radius'. When there was previously a lot of room between the Fresnel
zone (around the path of the signal) and some obstacles along the path,
when the appearent effective earth radius is decreased, the obstacles
penetrate into the Fresnel zone (or looking at the other way aroiund,

the appearant path drops by a few meters) attenuating the signal.
The same thing happens on VHF, but the signal strength variation is not
so dramatic, as the Fresnel zone is much larger at these frequencies,
so a drop of the appearant path by a few meters do not block the Fresnel
zone so easily.

Paul OH3LWR

--
Phone : +358-31-213 3657 Mail: Hameenpuisto 42 A 26
Internet: Paul.Keinanen@cc.tut.fi FIN-33200 TAMPERE
Telex : 58-100 1825 (ATTN: Keinanen Paul) FINLAND
X.400 : G=Paul S=Keinanen O=Kotiposti A=ELISA C=FI

Date: Thu, 15 Sep 1994 12:43:10 GMT
From: psinntp!arrl.org!zlau@uunet.uu.net
Subject: 1.2GHz on an HT -- how far?
To: info-hams@ucsd.edu

KB8PYM pouelle@uoft02.utoledo.edu wrote:
: In article <gbrush.13.000969B2@indy.net>, gbrush@indy.net (Greg Brush) writes:
: Greg,
: The physics involved suggest to me (a poor unfortunate Astrophysics grad
: student) during the warm months on 1.2GHz (with leaves on the trees) you
: might be lucky to get 100 feet with a rubber duck. Microwave ovens
: operate (or operated) near 1.3GHz on the principle that the H2O in the
: item to be heated is a strong absorber of energy at that frequency.
: Personally I'd go with 6m but that's neither here nor there. Anyway,
: 1.2GHz will be line of sight, and strongly influenced by any water containing
: items in the path (might be an interesting experiment to see how much
: the signal strength changes with humidity variations).

I have lots of experience transmitting through trees. Its a little bit
of a factor on 1296/2304, but if you have 20 dB of link margin, you can
usually ignore a stray tree or two. On 10 GHz, trees are a real problem,
though it is possible to blast through them to make 50 mile contacts
(10 GHz CW). My first 2304 contact was through some pretty thick trees
about 100 yards away (contact distance 70 miles). If you can get some
distance between yourself and the trees, it helps a lot.

My DX record in working someone with a 1296 FM handheld is from FN33JC
to someplace in FN24. I'm not sure where he was, but the closest spot
is about 75 miles away.

The Microwave oven principle is *wrong.* You can cook hot dogs just
fine with a 100 watts from a 2 meter transmitter. Check the 1972

QSTs around June--WA1MRF has a garbage can filter/hot dog cooker.
The frequency chosen is a compromise--you need a garbage band--someplace
where people won't complain about interference. Secondly, it has to cook
food all the way through (no raw meat in the middle). Finally, it has
to be easy to contain almost all of the RF (no leaky door seals). Thus,
2.45 GHz is the actual frequency, though you could probably build a
"microwave" oven anywhere from 100 to 4 GHz if cost/size/EMI was no
problem.

Finally, the lowest band with real water absorption problems is 24 GHz.
I make contacts on 10 GHz though rain all the time (I'm in New England).
If you want to see for yourself I plan to be on Mt Greylock this
Saturday--if you really want I can stay around till the
predicted thunderstorms occur in CT and make some contacts in the
soup :-). (Saturday afternoon/evening)

What is a problem is working across high/low pressure boundaries.
I had no problem working a VE2 on 1296 MHz roughly 200 miles away,
even though we were both in a low pressure zone. Couldn't work
the stations south of me in the high pressure zone, though I know
there were at least a dozen stations looking for me.

--
Zack Lau KH6CP/1
Internet: zlau@arrl.org

2 way QRP WAS
8 States on 10 GHz
10 grids on 2304 MHz

Date: Wed, 14 Sep 1994 18:01:51 GMT
From: ihnp4.ucsd.edu!ucsnews!newshub.sdsu.edu!nic-nac.CSU.net!usc!
howland.reston.ans.net!swiss.ans.net!malgudi.oar.net!utnetw.utoledo.edu!
uoft02.utoledo.edu!POUELLE@network.ucsd.edu
Subject: 1.2GHz on an HT -- how far?
To: info-hams@ucsd.edu

In article <gbrush.13.000969B2@indy.net>, gbrush@indy.net (Greg Brush) writes:
>Hi!
>
>A few of us with experience only in HF/VHF were discussing operation in the
>1.2GHz band and specifically just how far (or not) one could transmit with the
>typical HT operating on 1 or 2 watts with a rubber duck style antenna.
>
>It's obviously going to be very line-of-site sensitive, but in practical
>terms, in a moderately flat and forested area, are we talking hundreds of
>yards or a a couple miles?
>

>I'd like to hear from some people with practical experience in settings such
>as this.
>
>Thanks!
>Greg
>gbrush@indy.net

Greg,
The physics involved suggest to me (a poor unfortunate Astrophysics grad
student) during the warm months on 1.2GHz (with leaves on the trees) you
might be lucky to get 100 feet with a rubber duck. Microwave ovens
operate (or operated) near 1.3GHz on the principle that the H2O in the
item to be heated is a strong absorber of energy at that frequency.
Personally I'd go with 6m but that's neither here nor there. Anyway,
1.2GHz will be line of sight, and strongly influenced by any water containing
items in the path (might be an interesting experiment to see how much
the signal strength changes with humidity variations).

Patrick
KB8PYM
pouelle@utphya.phya.utoledo.edu
pouelle@uoft02.utoledo.edu
KB8PYM@W8HHF.#TOL.OH.USA.NA
Hey You!! (Grunt net)

Date: 14 Sep 1994 20:12:49 GMT
From: swrinde!howland.reston.ans.net!europa.eng.gtefsd.com!library.ucla.edu!
csulb.edu!nic-nac.CSU.net!charnel.ecst.csuchico.edu!olivea!ncd.com!
newshost.ncd.com!hansen.ncd.com!@@ihnp4.ucsd.edu
Subject: 1.2GHz on an HT -- how far?
To: info-hams@ucsd.edu

In article <Cw4sr4.L4B@utnetw.utoledo.edu>, pouelle@uoft02.utoledo.edu writes:
|> The physics involved suggest to me (a poor unfortunate Astrophysics grad
|> student) during the warm months on 1.2GHz (with leaves on the trees) you
|> might be lucky to get 100 feet with a rubber duck. Microwave ovens
|> operate (or operated) near 1.3GHz on the principle that the H2O in the
|> item to be heated is a strong absorber of energy at that frequency.
|> Personally I'd go with 6m but that's neither here nor there. Anyway,
|> 1.2GHz will be line of sight, and strongly influenced by any water containing
|> items in the path (might be an interesting experiment to see how much
|> the signal strength changes with humidity variations).

I hate to confuse theory with the real world but here goes.

I run two 1.2 GHz repeaters in the Bay Area. In this area 1.2 GHz is almost

the same as 440 MHz. In fact there are places in the Bay Area where 1.2 GHz works better than 440 MHz and other locations where the reverse is true. But for the most part the two types of systems have similar performance.

Microwave ovens do not operate at 1.3 GHz... They operate in the 2.4 GHz area (not sure exactly where).

Do trees and water adversly affect 1.2 GHz? Not really. Looking at the microwave books at the absorbtion of water vapor does not really get significant until you get to 5 to 10 GHz. At 1.2 GHz is it very minimal.

"Rain Fade" and other folklore about how water affects 1.2 GHz has no basis in what actually happens.

1.2 GHz is a great band. Lots of interesting people up here, and the band works great! There is less activity than your local 2 meter repeater, but that may be a good thing :-)

DE KJ6NN

Phil

Date: 15 Sep 1994 15:10:47 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!wupost!crcnis1.unl.edu!unlinfo.unl.edu!mcduffie@network.ucsd.edu
Subject: Amateur Videos
To: info-hams@ucsd.edu

jwa@tellabs.com (John Albert) writes:

>I was at a local hamfest last weekend and I was browsing the
>indoor exibits. There was a vendor selling CD ROMS so I purchased
>the latest addition of "QRZ". I almost bought one that was labled
>"Amateur Videos" but after a close examination, I saw the XXX rating.
>At first glance I figured it contained recordings of amateur TV or
>related subjects. Boy, was I wrong!

How do you know, if you didn't buy it, and why didn't you buy it?

Gary

Date: Mon, 12 Sep 1994 05:44:20 GMT
From: netcomsv!netcom.com!droy@decwrl.dec.com
Subject: AR-2500
To: info-hams@ucsd.edu

I just got a used AR-2500 scanner and I am looking for software to
control the radio via the rs-232 port. I AM NOT A PROGRAMMER by any
stretch of the imagination. I am a truck driver so if you have such a
program I can trade you.... well I could give you a ride in my truck!
Please respond here or to droy@netcom.com
Tnx. Dave

--

- -

Thanks to all those who have:
And to those who have not, remember
Please Send Money To:
Dave Roy
100 Harbor Blvd
Space # 16
Belmont, CA 94002

Ham Radio: KB6HLR . An EXPERIMENTAL No Code Extra
Packett Radio: kb6hlr @ n6qmy.#nocal.ca.usa.na
droy@netcom.com
" _ .... ._ _ ... ._ ._.. ._.. .._. ___ ._.. _._ ... "

Date: Wed, 14 Sep 1994 18:06:30 GMT
From: ihnp4.ucsd.edu!ucsnews!newshub.sdsu.edu!nic-nac.CSU.net!usc!
howland.reston.ans.net!swiss.ans.net!malgudi.oar.net!utnetw.utoledo.edu!
uoft02.utoledo.edu!POUELLE@network.ucsd.edu
Subject: Coax Fittings
To: info-hams@ucsd.edu

In article <351pa4$msf@mrnews.mro.dec.com>, randolph@est.enet.dec.com (Tom
Randolph) writes:
>
>In article <940909170153177@nwcs.org>, ron.magnus@nwcs.org (Ron Magnus) writes...
>>Greetings all.
>>

>>I have a nice supply of Belden 9913 Coax. I was thinking of using it on
>>my 2meter beam when I put it back up in the next week or so. My delima
>>is this. The 9913 is hollow core. I am concerened about water
>>collecting on the inside and making it worthless.
>>73, Ron...WA7GFE
>
>Here's what I did...
>I put on BNC connectors designed for RG213. These are close enough in size to
>the 9913 to work OK. You will never get a perfect seal out of the rubber gasket
>clamp-type connectors, because the air-core coax tends to collapse as you
>tighten the connector. So, basically it comes down to gooping it. I smeared
>some RTV into the coax-connector joint, and around the threads of the clamp. I
>then spiral-wrapped two layers of electrical tape over the entire connector
>assembly, the final layer going from the bottom up, like shingles on a roof,
>continuing a few inches up the coax. Needless to say, you have to plug
>everything together before you start wrapping. Pull the tape very tight so it
>conforms to the surface. Lastly, point the antenna end of the 9913 *down*. This
>way any water that gets in stays put. You can always pull the connector and
>drain it out, if necessary. You will probably need a short piece of RG58
>between the 9913 and the antenna to do this. I've had no problems for about 1
>yr of New England weather.
>
>A couple of things: I know many hams say don't use RTV because it's corrosive
>over time... So far no problem, and all the connectors are nickel-plated brass
>anyway. You may want to use that coax-seal putty instead. Also, as far as
>condensation, my 2m antenna is chimney-mounted, and the 9913 runs up alongside
>the chimney, enclosed except for the last 3-4 ft. Therefore, your milage may
>vary if you run it up a tower.
>
>-Tom R.   N1OOQ   randolph@est.enet.dec.com

Since you are going to the expense and trouble of using 9913, do it right the
first time - get the N connectors made for 9913. They should seal properly,
and provide a real good weather proof connection since they were designed
to do just that with that cable.

Patrick
KB8PYM
pouelle@utphya.phya.utoledo.edu
pouelle@uoft02.utoledo.edu
KB8PYM@W8HHF.#TOL.OH.USA.NA

Date: 14 Sep 1994 18:05:42 GMT
From: ihnp4.ucsd.edu!ucsnews!newshub.sdsu.edu!nic-nac.CSU.net!usc!
howland.reston.ans.net!math.ohio-state.edu!magnus.acs.ohio-state.edu!csn!
col.hp.com!fc.hp.com!paulc@network.ucsd.edu

Subject: Colorado Connection Question
To: info-hams@ucsd.edu

This info is probably too late, but the Connection doesn't currently make it much past Monarch Pass (147.285 - Salida) when heading over to Montrose that way. That machine does cover into the San Luis valley pretty well, from what I hear. I do not know the coverage of the G.J. 147.285 repeater to the south towards Montrose, it might make it, but that repeater is not a wide coverage machine.

All Colorado Connection repeaters are continuously linked.

The Montrose repeater (145.145) is linked to 147.12 in Gunnison and 146.82 in Grand Junction. PL of 107 on some of them.

The Vail repeater (146.61) is linked to 146.88 in Glenwood Springs.

Let us know if you had any success getting into Montrose on the Connection...

-Paul C. KG0CZ

Date: 11 Sep 1994 23:47:35 GMT
From: mvb.saic.com!news.alpha.net!pacifier!rainrgnews0!psgrain!charnel.ecst.csuchico.edu!yeshua.marcam.com!zip.eecs.umich.edu!newsxfer.itd.umich.edu!jobone!ukma!asuvax!chnews!fallout@ihnp4.ucsd.edu
Subject: CW is a joke (I warned you)
To: info-hams@ucsd.edu

Cecil Moore (cecilmoore@delphi.com) wrote:

: and said, ...-. ..   --- --   ... --- -- .   .... .- -- ...
: --- ..- ... -   -.-. .- -. -   - . .-.. .-..   .-   .--- --- -.- .
:
dadgum't, TRN screwed up. That first character in the second line should be .---

73, KG7CK, OOTC, Cecil_A_Moore@ccm.ch.intel.com (Not speaking for Intel)

Date: 13 Sep 1994 05:25:56 GMT
From: haven.umd.edu!cville-srv.wam.umd.edu!ham@purdue.edu
Subject: History of EL-KEY??
To: info-hams@ucsd.edu

I recently received an EL-KEY paddle. Anyone know of the history
of these guys???

--
73,   _________   _________ The
                                   \ / Long   Original
Scott Rosenfeld Amateur Radio NF3I Burtonsville, MD | Live $5.00
  WAC-CW/SSB WAS DXCC - 130 QSLed on dipoles __________| Dipoles! Antenna!

Date: Wed, 14 Sep 1994 16:44:03 GMT
From: ihnp4.ucsd.edu!ucsnews!newshub.sdsu.edu!nic-nac.CSU.net!usc!
howland.reston.ans.net!spool.mu.edu!news.clark.edu!netnews.nwnet.net!
reuter.cse.ogi.edu!hp-cv!hp-pcd!news!ericr@network.ucsd.
Subject: Looking for the best DSP filter for HF?
To: info-hams@ucsd.edu

Don't underestimate the effectiveness of the much less expensive Radio
Shack DSP (about $80). I am extremely happy with it. You can give it
a try and if you don't like it, return it, but maybe save enough
money for an IF filter.

--
Eric Ross, WB7SDE | Hewlett-Packard Company, VPR
ericr@vcd.hp.com | Vancouver, WA, USA

Date: 14 Sep 1994 21:54:05 -0700
From: odin.community.net!odin.community.net!not-for-mail@uunet.uu.net
Subject: Need help for a fello ham
To: info-hams@ucsd.edu

     I am looking on the behalf of a fellow amature and friend of mine
a pict gif or jpeg, (or what ever) of the head or face of the pinck
panther, the cartoon one thats is on Tv. Irean kk6xa or kk6xb (one is her
husband) is building a rc controled air plane and she is painting it pink
and calling it the "Pink Panther" and think it tould be cuite to have its
face on the tail.

     Please send me the picture to me via e-mail (please no uuencoded
ones) or mail her the picture directly to her, you can find her address
in the call book.

-Micah-

Date: Tue, 13 Sep 1994 21:15:04
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!cs.utexas.edu!
convex!egsner!wb9rxw!kf5iw!rwsys!ocitor!FredGate@network.ucsd.edu
Subject: New HDN Releases
To: info-hams@ucsd.edu

The following files were processed Tuesday 09-13-94 by the Ham Dist Net
Please allow 48 hours for files to arrive at the HDN Anonymous FTP Site.

```
 HAMDEMO         HAM: Amateur Radio Software Demo Programs
 ------------------------------------------------------------------------------
 ID_NA.DOC        1,813 ID Logic NA Simulator Description
 ID_NA491.ZIP   493,194 ID-Logic AM/FM Simulator for windows
 ID_SW.DOC        1,629 ID Logic SW Simulator Description
 ID_SW491.ZIP   511,165 ID-Logic SW Simulator for windows
 ------------------------------------------------------------------------------
 1,007,801   bytes in 4   file(s)


 HAMUTIL         HAM: Radio operating aids
 ------------------------------------------------------------------------------
 ID_WT.DOC        2,078 ID Logic World-Time Clock description
 ID_WT491.ZIP   170,653 ID Logic World-Time Clock
 ------------------------------------------------------------------------------
 172,731     bytes in 2   file(s)


 Total of 1,180,532 in 6 file(s)


Official Ham Distribution Net FTP Server :    ftp.iea.com    /pub/borg/hdn
Official Ham Distribution Net E-mail     :    ab5sm@netcom.com

Official U.S. Postal Service Address     :    Ham Distribution Net
                                              P.O. Box 50003
                                              Dallas, Texas 75250-0003

Official Ham Distribution Net BBS'       :    (214) 226-1181 8N1 16.8k v32b
                                              (214) 226-1182 8N1 14.4k v32b
                                              Logon: Guest;guest

 * Origin: Africa-Asia-Australia-Europe-USA/Canada-S.America (1:124/7009)
```

Date: Wed, 14 Sep 1994 18:08:27 GMT

From: ihnp4.ucsd.edu!ucsnews!newshub.sdsu.edu!nic-nac.CSU.net!usc!
howland.reston.ans.net!swiss.ans.net!malgudi.oar.net!utnetw.utoledo.edu!
uoft02.utoledo.edu!POUELLE@network.ucsd.edu
Subject: New license elapsed time
To: info-hams@ucsd.edu

In article <3526ou$8ke@news.cc.oberlin.edu>, pruth@ocvaxa.cc.oberlin.edu writes:
>Took Tech test Sunday, July 17--arrived today, Sept. 12--eight weeks.
>I had even written on my personal calendar for Sept. 12: "Tech
>license due today"! And, it arrived one day after my birthday.
>--Bill Ruth, Oberlin, Ohio   KB8USZ

Great! and Happy Birthday!

Patrick _ in beautiful Toledo, OH
KB8PYM
pouelle@utphya.phya.utoledo.edu

Date: 15 Sep 94 22:30:44 GMT
From: news-mail-gateway@ucsd.edu
Subject: New subscriber
To: info-hams@ucsd.edu

SUBSCRIBE

Date: 15 Sep 1994 08:55:23 -0400
From: psinntp!JH.Org!not-for-mail@uunet.uu.net
Subject: telnet to fcc?
To: info-hams@ucsd.edu

twise@shell.portal.com (Travis A. Wise) writes:

>I thought I remembered hearing something about the fcc having a telnet
>site...I can telnet to FCC.GOV, but can't get past the password.

They do have a gopher site, I forget how to get there. It's not
very exciting, but not bad for a first try.

>At some point, it'd be nifty if they had an on-line, up to the minute
>way for us to check license statuses, as they entered them into their
>computers. But then this is .gov not .com. Oh well.

Supposedly the FCC will have electronic filing of 610s by the VEC
before the end of the year, they're testing now. A licensee will

be able to get their callsign electronically by bbs (and hopefully
internet) within a week of taking the test.

This was discussed at the recent Hudson ARRL convention.

--
%%
ss@jh.org   Steve Steinberg   Amateur Radio Callsign: _______

Date: 15 Sep 1994 05:07:16 GMT
From: linet02.li.net!usenet@uunet.uu.net
Subject: ZAPPING dead Nicad Packs with my quick charger??
To: info-hams@ucsd.edu

In article <Cw0urM.5E9@cbfsb.cb.att.com>, cropley@cbnewsf.cb.att.com (andrew
peter.cropley) says:
>
>QUESTION. Can I "ZAP" my pack by leaving on 24 volts for a while??

I would not leave it on for a while. What I would do is give it a shot from a
12V, 20-30 amp
power supply for ONE SECOND. That hopefully will bring the cells back in line and
they will accept
a charge again, albiet fractionally less than they would originally. Of course,
if it has been
discharged for so long, you may have no choice but to chuck the battery or replace
the cells.

>Also curious as to Y the charger steps down to slow / trickle charge
>so quickly??

You probably have a cell that has reversed polarity from overdischarge and is
refusing the higher current
charge. Your charger senses this and reverts to trickle charge to top off the
battery and prevent
overcharge damage.

****
*   :JOE TOMASONE: GOD IS REAL; UNLESS DECLARED INTEGER   *
* INTERNET: jtomason@li.net   AMPR AX.25: N2MUO@N2BQF.#NLI.NY.USA   *
****

End of Info-Hams Digest V94 #1027
****